

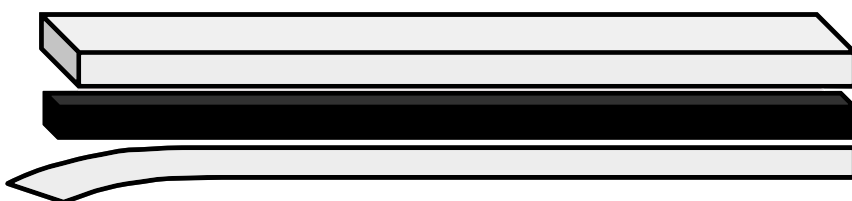
CLD Squares

Physical Specs

- 12" x 12"
- 120 mil thick butyl
- 12 mil thick aluminum
- 1.1 lb per square foot
- Made in the USA

Construction

- Aluminum foil
- Viscoelastic polymer
- Release liner



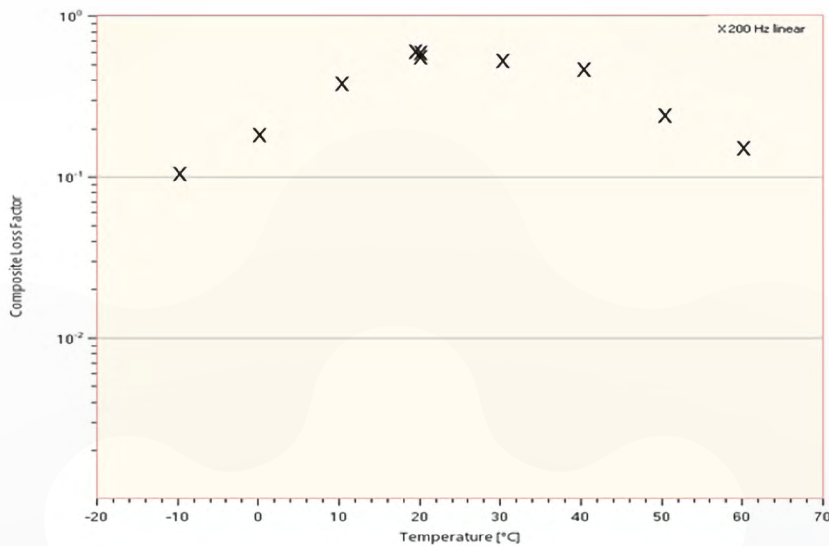
Properties

| | | |
|--|--|-----------------------|
| Color | Facing | Aluminum foil |
| | Polymer | Black |
| Specific gravity | 1.50 | |
| Hardness (ASTM D-5) | Metric | 6.5 – 9.0 mm |
| | English units | 255.9 mils – 354 mils |
| Shelf life | At least six months when stored at 40°C or less | |
| Temperature resistance | Withstands a bake of one hour at 200°C with no deformation | |
| Cold flexibility | Can be bent around a 25 mm Mandrell at 30°C with no cracking or loss of adhesion | |
| Flammability | Meets FMVSS 302, self-extinguishing | |
| Damping properties (Per SAEJ1637, 0.8 mm test beam) | Composite loss factor (η_c) 20°C @ 200 Hz: 0.7 | |
| Peel strength (90 ° Peel, 300 mm/min) | Oily cold rolled steel | 42 N/25 mm |
| | Oily galvanized steel | 35 N/25 mm |
| | E-coat (ED-11) | 65 N/25 mm |

| Testing thru Ford | | APT-200-415 | Ford Requirements |
|-------------------|---|-----------------|------------------------------|
| 3.4 | Color | Black | Black |
| 3.5 | Solids, min | 99.00% | 98.00% |
| 3.6 | Fogging | >70 | >70 |
| 3.7 | Wait for volume at 23°C | 1.50 ± 0.05kg/L | 1.3–1.7 kg/l |
| 3.8 | 3.8 Cone penetration (ASTM D937) | | |
| | 3.8.1.1 at 23+/-2C | 70 | 45–75 (internal spec. 80–95) |
| | 3.8.1.2 at -23+/2C, max | 60 | 10 min |
| 3.9 | Flow rate (FLTM BV 153-01) | No flow, pass | No flow |
| 3.10 | Cold resistance after aging | Pass | No loss of adhesion |
| 3.11 | Shear adhesion | | |
| | 3.11.1 at 23C+/-2C, min | 34.7 | 30 kpa, min |
| | 3.11.2 at 30C+/-2C | Pass | No loss of adhesion |
| | 3.11.3 at 60+/-2C | 10 kpa | 10 kpa, min |
| 3.12 | Peel adhesion, min | 15.0 N/cm | 5.5 N/cm |
| 3.13 | Compression load | 545 N | 350–840 N |
| 3.14 | Repair oven stability | Pass | No blistering |
| 3.15 | Migration staining | Pass | No migration stain |
| 3.16 | Quality | Pass | Free from foreign materials |
| 3.17 | Storage stability (from date of receipt) | Pass | 12 months |

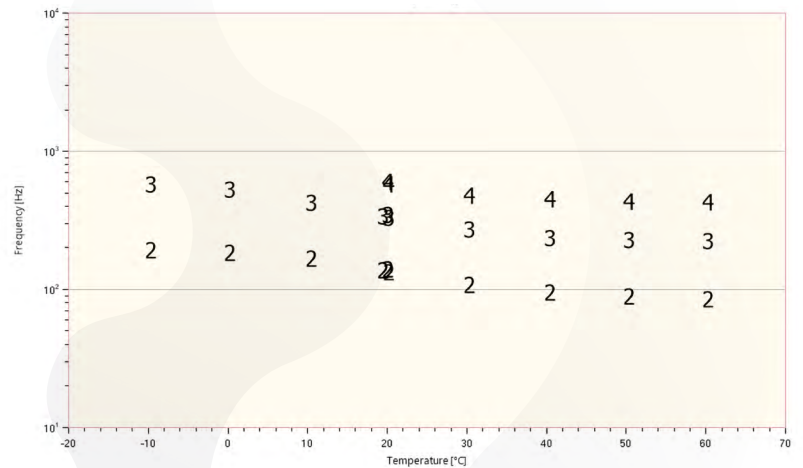
| Composite Loss Factor vs. Temperature | | |
|---------------------------------------|-----------|--------|
| Frequency (Hz) | Temp (°C) | CLF |
| 200 | 20.3 | 0.5856 |
| 200 | 10.5 | 0.3780 |
| 200 | 0.3 | 0.1813 |
| 200 | -9.7 | 0.1039 |
| 200 | 19.6 | 0.5961 |
| 200 | 30.4 | 0.5238 |
| 200 | 40.5 | 0.4619 |
| 200 | 50.4 | 0.2394 |
| 200 | 60.3 | 0.1502 |
| 200 | 20.2 | 0.5519 |

This test was done starting at room temperature, then going down to freezing, then going back to room temperature, then to high heat, and then back to room temperature. As you can see, ResoNix CLD Squares hold up superbly and do not have degraded performance over temperature swings.

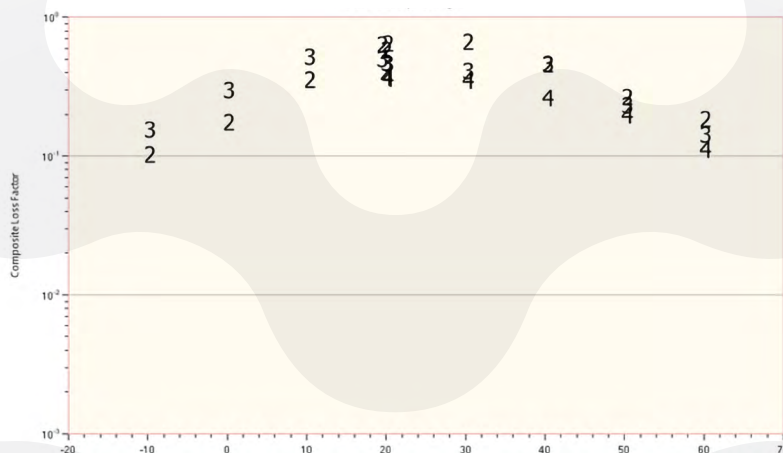


Interpolated Composite Loss Factor vs. Temperature Testing

Frequency vs. Temperature



Composite Loss Factor vs. Temperature



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